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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,984	09/27/2005	Fuquan Zeng	10076-N2459-APP	9239

23456 7590 01/26/2009

WADDEY & PATTERSON, P.C.
1600 DIVISION STREET, SUITE 500
NASHVILLE, TN 37203

EXAMINER	
YAGER, JAMES C	
ART UNIT	PAPER NUMBER
1794	

NOTIFICATION DATE	DELIVERY MODE
01/26/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docket@IPLAWGROUP.COM
BFL@iplawgroup.com

Office Action Summary	Application No.	Applicant(s)	
	10/530,984	ZENG, FUQUAN	
	Examiner	Art Unit	
	JAMES YAGER	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 November 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *18-20,57 and 58* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *18-20, 57 and 58* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed 05 November 2008 has been entered. Claims 18-20, 57 and 58 are pending in the application.

2. The examiner notes that the status of claim 57 is improperly identified as "new" the proper identifier should be "amended".

3. In light of the amendments to the claims, all rejections under 35 U.S.C. 112, second paragraph are withdrawn.

Election/Restrictions

4. Applicant's election of Group III in the reply filed on 05 November 2008 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

5. Claims 1-17 and 21-56 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 05 November 2008.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 18 and 57 are rejected under 35 U.S.C. 102(b) as being anticipated by Zhao et al. (US 6,423,764).

Regarding claims 18 and 57, Zhao discloses a bottle made of polyethylene terephthalate (C1/L30-35, C7/L25-30) comprising a poly(oxyalkene) polymeric colorant comprising anthraquinone (C5/L30-35) (i.e. a disperse dye having a chemical affinity for polyethylene terephthalate; anthraquinone). Given that Zhao discloses colorant that is anthraquinone as presently claimed, it is clear that the anthraquinone will inherently have chemical affinity for polyethylene terephthalate as presently claimed.

Although Zhao does not disclose an article produced by the process as claimed, it is noted that "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process", *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Further, "although produced by a different process, the burden shifts to applicant to

come forward with evidence establishing an unobvious difference between the claimed product and the prior art product", *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983). See MPEP 2113.

Therefore, absent evidence of criticality regarding the presently claimed process and given that Zhao meets the requirements of the claimed product, Zhao clearly meet the requirements of present claim 18.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 18-20, 57 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luka et al. (6,393,803) in view of Zhao et al. (US 6,423,764).

Regarding claims 18-20, 46, 57 and 58, Luka discloses coating a container made of polyethylene terephthalate (C4/L6-7) on the exterior surface with a colorant (C3/L65-67). Luka does not specifically disclose that the colorant has a chemical affinity for polyethylene terephthalate.

Zhao discloses a bottle made of polyethylene terephthalate (C1/L30-35, C7/L25-30) comprising a poly(oxyalkene) polymeric colorant comprising anthraquinone (C5/L30-35) (i.e. a disperse dye having a chemical affinity for polyethylene terephthalate; anthraquinone). Zhao further discloses that the poly(oxyalkene) polymeric colorant comprising anthraquinone provides effective and stable colorations to thermoplastic resins, are easily handled and exhibit desirable migration properties (C4/66-C5/L2). Given that Zhao discloses colorant that is anthraquinone as presently claimed, it is clear that the anthraquinone will intrinsically have chemical affinity for polyethylene terephthalate as presently claimed.

Luka and Zhao are analogous are because both teach about polyethylene terephthalate containers comprising a colorant. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the poly(oxyalkene) polymeric colorant comprising anthraquinone of Zhao as the colorant for coating the bottle of Luka to provide a bottle with a colorant that provides effective and stable coloration, is easily handled and exhibits desirable migration properties.

Examiner notes that since Luka in combination with Zhao discloses a molded polyethylene terephthalate container as presently claimed and further given that Zhao discloses that anthraquinone has migration properties, it is clear that the anthraquinone

would intrinsically be bound below the surface of the container as the result of migration as presently claimed.

Regarding claim 18, although modified Luka does not disclose an article produced by the process as claimed, it is noted that "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process", *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Further, "although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product", *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983). See MPEP 2113.

Therefore, absent evidence of criticality regarding the presently claimed process and given that modified Luka meets the requirements of the claimed product, modified Luka clearly meet the requirements of present claim 18.

Response to Arguments

11. Applicant's arguments filed 05 November 2008 have been fully considered but they are not persuasive. Applicant argues:

The cited reference to Zhao teaches a wide range of colorants. However, it does not describe any disperse dyes. Although a colourant is disclosed in Table 1 at

column 5 which includes a chromophore which is anthraquinone, that colourant also includes approximately 12-15 moles of EO (ethylene oxide) and 8-10 moles of PO (propylene oxide) which necessitates the dye being polyoxyalkylenated. As found within column 5, line 48 of the Zhao reference such polyoxyalkylenated colourants are "liquid at ambient conditions of temperature and pressure." As such, the incorporation of the polyoxyalkylenated groups will mean that such dyes as taught within the Zhao reference are not dispersed dyes. EO and PO groups are used to render materials water soluble and/or increase hydrophilicity of materials. Conversely, disperse dyes are a particular class of dyes which are water insoluble.

There is no disclosure in Zhao that the polyoxyalkene anthraquinone is water soluble. Given that the polyoxyalkene anthraquinone has both EO and PO groups, it is clear that the dye has some degree of water insolubility derived from the PO groups and would therefore form a dispersion.

12. Applicant's arguments filed 05 November 2008 have been fully considered but they are not persuasive. Applicant argues:

In further clarifying the invention of the above-captioned application, claim 18 has been amended and as such Zhao does not disclose a container or container perform. This further delineates the above-captioned invention from the teachings of Zhao as Zhao is concerned with producing a mass of colored polyester, plastic or resin "exhibiting substantially uniform colorations and optical physical properties throughout..." (column 2, line 50). This is also stressed at column 1, line 23 where Zhao states "the inventive product produces colored thermoplastics of substantially the same shades and uniformity." Zhao is further distinguished as Zhao does not

teach of binding disperse dyes, let alone any dyes predominately to one but not the other surface of an article as disclosed in claim 19 of the above-captioned application. As such, the teachings of Zhao teach away from the invention of the above-captioned application and can in no way teach the features as embodied by the invention of the present application. As a consequence, Zhao cannot render and anticipate the invention of amended claims 18-20 and 57 in new claim 58 of the above-captioned application, all which should be allowed and the rejection under 35 USC § 102 be withdrawn.

Firstly, as noted in the previous office action, Zhao at C7/L25-30 notes that the colored PET is intended to be utilized to make containers for soft drinks, beer, liquor etc. Therefore, Zhao clearly discloses a container or a container perform.

Secondly, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which

applicant relies (i.e. that the product does not exhibit substantially uniform colorations and optical physical properties throughout) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Thirdly, in the previous office action, Zhao was used to make 35 U.S.C. §102 rejection against claim 18, not claims 19 and 20. Therefore, the argument that Zhao does not teach a disperse dye bound predominantly to one, but not the other, of said surfaces, as recited in claims 19 and 20 is moot.

13. Applicant's arguments filed 05 November 2008 have been fully considered but they are not persuasive. Applicant argues:

> Claims 18-20, 46, 47, 56, 57 are objected to under 35 USC §103 as being unpatentable over Luca, in view of Zhao et al. As previously stated, claims 18, 19, 20 have been amended to further clarify the invention from the prior art and claims 46, 47 and 56 have been cancelled which claim 57 also amended and newly claimed 58 added to further improve upon this clarification. In addition to the differences described above relating to Zhao, applicant respectfully suggests that Luka does not render the claims of the above captioned application obvious when combined with Zhao. As the office action states Luka does not teach a colourant having a chemical affinity for polyethylene terephthalate, does not teach the use of a disperse dye.

Examiner agrees that Luka does not teach the colorant having an affinity for PET that is a disperse dye. Zhao is used to teach the colorant having an affinity for PET that is a disperse dye.

14. Applicant's arguments filed 05 November 2008 have been fully considered but they are not persuasive. Applicant argues:

> When combined with Zhao, neither teach of a disperse dye as the "poly(oxyalkene) polymeric colourant comprising anthraquinone" is not a disperse dye, as disclosed in the claims of the above captioned application.

As noted above, it is the examiners position that the polyoxyalkene anthraquinone of Zhao is at least to some degree water insoluble and is therefore a disperse dye.

15. Applicant's arguments filed 05 November 2008 have been fully considered but they are not persuasive. Applicant argues:

> Furthermore, not only do Zhao and Luka teach away from the invention of the above captioned application, but they also teach away from one another. Specifically, Zhao teaches a method of producing colored polyester thermoplastic materials using specific solid stating procedures. Luka teaches coatings on a finished product, these are fundamentally quite different. Zhao teaches combining a coloring agent after initial polymerization but before completion of a solid stating step.
>
> Both references teach away from invention of the present application. Zhao teaches of dying at a certain step so as to not stain a container whereas Luka teaches the application of a coating to a material. The invention of the above captioned application uses disperse dyes to dye containers or container performs.
>
> As such the rejection under 35 U.S.C. §103 should be removed and the claims allowed. Applicant respectfully requests that the claims of the present invention be allowed and the application be allowed to issue.

Note that while Zhao does not disclose all the features of the present claimed invention, Zhao is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely the disperse dye comprising anthraquinone, and in combination with the primary reference, discloses the presently claimed invention.

Given that Zhao is only used to teach the disperse dye comprising anthraquinone and its advantages, not the method of producing the product, the specific procedure of Zhao (solid stating) is irrelevant. Since both Luka and Zhao teach about PET

containers comprising a colorant, they are clearly analogous art. One of ordinary skill in the art at the time the invention was made would have clearly noted the benefits of the polyoxyalkene anthraquinone dye of Zhao (effective and stable coloration, easy handling and desirable migration properties) and been motivated to use said dye as the colorant for coating the bottle of Luka.

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES YAGER whose telephone number is (571)270-

3880. The examiner can normally be reached on Mon - Thurs, 7:30am-5pm, EST, Alt. Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571 272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JY 1/13/09

/Callie E. Shosho/
Supervisory Patent Examiner, Art Unit 1794